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## 2. *Illustrative Alternatives*

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This section describes the alternatives being considered to accommodate future travel demand.

### 2.1 Do-Nothing Alternative

A “do nothing” or “no build” alternative will be considered throughout the course of the environmental analysis. Making no improvements to M-15, beyond the current repaving now underway, will remain an option through the public hearing stage of the project.

### 2.2 Mass Transit Alternative

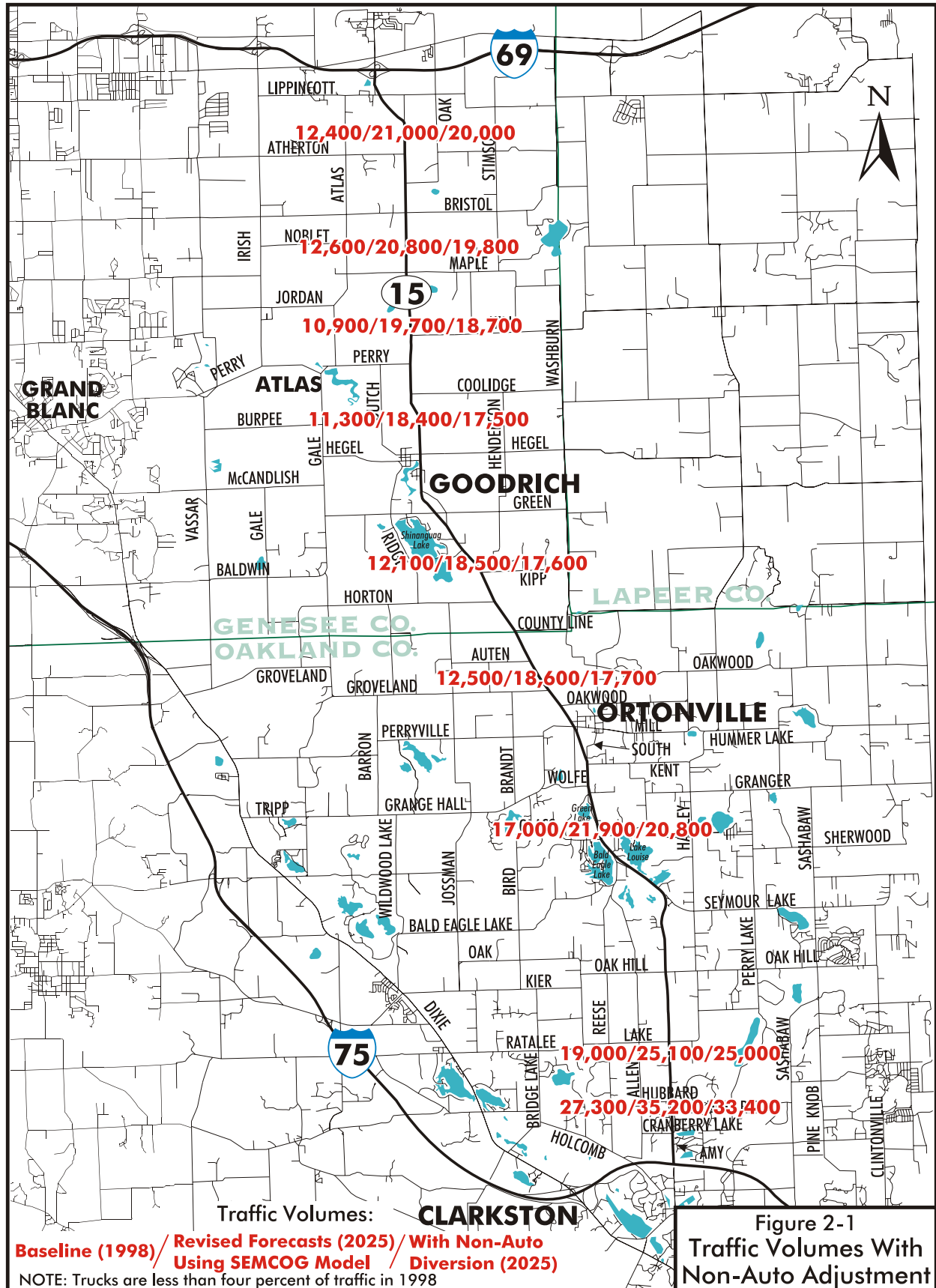
Mass transit must be considered in all federally-funded projects that address substantial improvements to the transportation network. In this case, mass transit and other non-automobile modes/options (e.g., telecommuting, demand management, etc.) have been considered from the standpoint of the maximum potential diversion from personal vehicles that might be achieved. Even under the most favorable conditions, it is unlikely that more than five percent of the travel on M-15 could ever be diverted from the auto. This diversion would not affect the need for four lanes on M-15 (Figure 2-1). Therefore, the non-auto alternative is not considered a viable option and will not be the focus of additional analysis.

### 2.3 Low Cost Improvements/TSM - Alternative No. 1

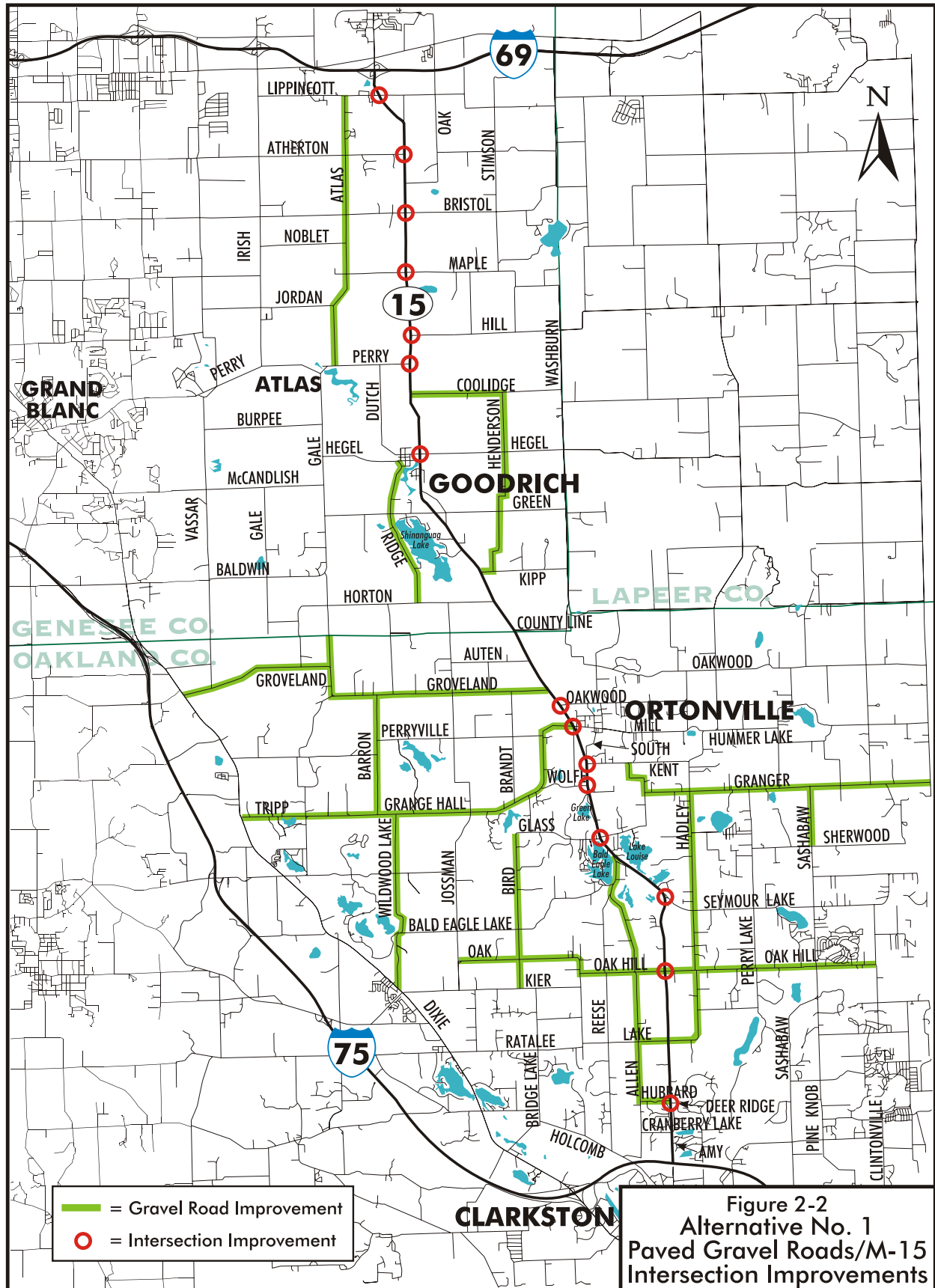
Low-cost improvements need to be considered as an alternative to widening the roadway for its entire 20-mile length. Low-cost improvements include transportation systems management (TSM) techniques that are designed to maximize the use of the existing transportation system. A number of options are proposed under this umbrella of low cost improvements and each is discussed below. Together they comprise Alternative No. 1 (Figure 2-2).

#### Pave Gravel Roads

Many of the non-state highways in Oakland and Genesee Counties are gravel. They generally serve low traffic volumes at low speeds. Paving these roads would improve their capacity and usefulness. In this role, they could provide relief to M-15.



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Figure 2-2  
Alternative No. 1  
Paved Gravel Roads/M-15  
Intersection Improvements

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## Upgrade Intersections

Intersections invariably involve interaction of crossing/turning vehicles. These movements are controlled by stop signs or signals that bring traffic to a halt. Conflicts can be reduced by removing turning vehicles from the through travel lanes. This means adding left-turn and right-turn lanes on the near sides of intersections and return tapers on the far sides to allow vehicles turning from side roads to enter the traffic stream more smoothly.

Oakland County has aggressively pursued the implementation of a FAST-TRAC (Faster And Safer Travel through Traffic Routing and Advanced Controls) system. It includes optical sensors that count traffic at each approach of the intersection through each signal cycle. The system reallocates green time to the approaches that have the highest counts. This effectively adjusts the green time available to match the travel demand from the heaviest approach in a dynamic way. The result is improved travel flow and a signal that is more responsive to the varieties of travel demand over time

## Roundabouts

Roundabouts are an innovative solution in America that allows the continuous flow/merging of traffic at intersecting roads. Three key features of modern roundabouts that set them apart from earlier traffic circle configurations are: 1) approaching traffic enters the roundabout at an angle; 2) entries to the roundabout flare to multiple lanes; and, 3) traffic on the approaches always yields to traffic within the roundabout. Roundabouts have had success in Europe in reducing the severity of crashes as well as certain accident types, while maintaining a steady traffic flow. Under the appropriate circumstances, where right-of-way is available at an intersection, roundabouts may prove to be a viable solution in the M-15 corridor.

## Incident Management

Incident management means increasing response rates to incidents (crashes and other vehicles that are disabled) and moving vehicles out of the traffic stream as quickly as possible. The primary focus of incident management is in freeway situations, but the principle applies to other roadways. While it does not increase capacity from the standpoint of base infrastructure, it is a means of making the best use of the capacity that exists.

## Access Management

In recent years, the Michigan Department of Transportation has developed guidance with respect to access management and driveway control. The goal is to reduce friction on the mainline roadway and minimize conflicts that lead to accidents and delay. Access management involves observing recommended driveway spacings based on roadway speeds; encouraging shared driveways by adjacent owners; providing access from side streets; providing, in some cases, frontage roads or service drives; and, seeking other innovative ways to minimize direct conflict with through traffic. Access management will be an important component of any improvements made in the M-15 corridor.

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## Telecommuting/Demand Management

It is evident that under the right circumstances, individuals are no longer commuting to work on a daily basis, but are instead working at home via electronic means. Interestingly, analysis of this trend finds that travel reduction is not as great as one might expect. In fact, the need for individuals to be in the workplace on a regular basis seems to counterbalance the advantages gained by telecommuting such that travel, overall, is not reduced significantly. This pattern could change in the future but at the present time, telecommuting is not seen as a panacea in terms of the need for additional roadway capacity.

Demand management is a partner to telecommuting in the sense that it is an attempt to reduce travel. Demand management generally takes the form of actions by large employers, which may set up ridesharing programs, provide four-day workweeks, or allow travel during off-peak times to reduce the peaking characteristics associated with work travel.

In the end, neither telecommuting nor demand management is expected to influence travel forecast in the M-15 corridor in such a way that the laneage needs evidenced by travel projections are reduced.

## 2.4 New Alignments - Alternative No. 2

Several roads on new alignment will be considered to provide relief to M-15 and to offer better truck movement in the corridor. One option would use Irish Road to connect I-69 to Dixie Highway just south of the Oakland/Genesee county line (Figure 2-3). Others options are bypasses: one on the east side of Goodrich and the second on the east side of Huff Lake and Lake Louise. It is noteworthy that the proposed improvement to Irish Road was provided at the August 24 workshop to revise the previously define Alternative No. 2.

Finally, consideration is being given to formation of a one-way pair in the Village of Goodrich. The existing roadway would serve as the southbound element of the one-way pair. The northbound section of the pair would take off from the existing curve in M-15 south of Goodrich (at the point where M-15 transitions from a northwest-southeast orientation to a north-south orientation). The northbound road would proceed across Kearsley Creek, then north to the east of Putnam and to the west of the new subdivision whose principal roads are Rose Lane and Fox Hollow. It would cross East Hegel and transition back to M-15 south of the Bank One property. The new roadway would pass through a now vacant area that has been proposed for a senior center. Advantages to such an approach may be fewer takings of structures along M-15 and reinstitution of on-street parking on southbound M-15 through the commercial district of Goodrich.

## 2.5 M-15 Reconstruction - Alternative No. 3

A number of roadway types may have application to the reconstruction of M-15. Some of these have been examined and found not to be feasible while others are offered as viable Illustrative Alternatives. Each of these is discussed below.